

CLAIMS

Claim 1. A stabilized buoy platform comprising:

- 5 (a) a buoy float having a support platform for mounting a stabilized platform on the buoy float;
- (b) a stabilizing system mounted on the platform for stabilizing a singular or a plurality of devices and/or tools from the movements of the buoy float in one, two or three
- 10 axis which include pitch, roll and azimuth; and
- (c) at least one device and/or tool mounted on the stabilizing system.

Claim 2. The stabilized buoy platform of Claim 1 wherein the device is an image receiving

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Claim 3. The stabilized buoy platform of Claim 1, wherein the image receiving device is selected from the group comprising a camera, sensor, thermal imager, infrared sensor and GPS.

20 Claim 4. The stabilized buoy platform of Claim 1 wherein the device and/or tools emit or projects light, illumination or radiation in various spectrums or frequencies.

Claim 5. The stabilized buoy platform of Claim 1 wherein the device and/or tools emit or projects particles of physical mass including, but not limited to; water, chemicals, paints,

25 solvents, sand, rock or other projectiles.

Claim 6. The stabilized buoy platform of Claim 1 wherein the device and/or tools are, but not limited to; a paint brush, drill, welding iron and/or gun, and can accomplish tasks which are, but are not limited to; painting, drilling, welding, sandblasting and/or shooting.

5 Claim 7.. The stabilized buoy platform of Claim 1 wherein the device and/or tools can be operated from a remote location via wire or wireless control.

Claim 8. The stabilized buoy platform of Claim 1 wherein the device and/or tools can be operated from a remote location via wire or wireless control by a human or a computer.

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Claim 9. The stabilized buoy platform of Claim 1 wherein the device and/or tools can be operated from the buoy by direct control of a human operator or a computer stationed on the buoy platform.

15 Claim 10. The stabilized buoy platform of Claim 1 wherein the device and/or tools are sensors and

- (a) a computer recognizes movement within the stabilized sensor image; and
- (b) the computer sends signals to the stabilizer and/or camera which control the stabilizer and/or camera to track the movement of the object seen within the stabilized image.

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Claim 11. The stabilized buoy platform of Claim 10 wherein the device and/or tools take an action based upon the commands from a person or a computer.

25 Claim 12. The stabilized buoy platform of Claim 1 wherein the stabilizer uses the method of maintaining a level payload plate by use of a single sensor package located on the base and which senses motion of the base about one, two or three axis, and

- (a) there are sensor means to sense the joint angles of the frame components, and
- (b) uses the joint angles to determine the position of the payload plate in reference to level provided by a level sensor on the base plate or incorporated within the first sensor package
- 5 (c) keeps the payload plate level or at a pre-determined position in relation to level.

Claim 13. The stabilized buoy platform of Claim 12 wherein the stabilizer uses the method of maintaining a level payload plate by use of a single sensor package located anywhere on the buoy platform or upon the stabilized plate, and

- 10 (a) uses the joint angles to determine the position of the payload plate in reference to level provided by a level sensor located anywhere upon the buoy or the stabilizer.
- (b) keeps the payload plate level or at a pre-determined position in relation to level.

Claim 14. The stabilized buoy platform of Claim 13 wherein the joint angles of the frame parts are monitored from a known point, such as a hard stop, with a shaft encoder or other sensing device, and

- (a) the joint angle data is used to determine the position of the payload plate in reference to level provided by a level sensor located anywhere upon the buoy or the stabilizer, and
- (b) the payload plate is kept level or at a pre-determined position in relation to level.

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Claim 15. The method of calculating the joint angle of all the moving parts, which,

- a. when computed in relation to the level provided by a level sensor, which may be located anywhere on the buoy or the stabilizer, and
- b. when taken in relation to the position of the sensor package will allow the CPU to
- 25 determine the position of the stabilized payload plate and
- c. will move the payload platform to maintain level or any other chosen angle to the level.

Claim 16. The method of stabilizing the payload platform using one or more sensor packages, singularly or in plurality have the capability to sense motion of the base and level in one two or three orthogonal axis by;

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- (a) electrically or mechanically sensing the joint angles of the framework and
- (b) sending the joint angle data to the CPU, and
- (c) the CPU using joint angle data in conjunction with level sensor data to determine the position of the stabilized payload platform and
- 10 (d) using rate of motion sensors to provide rate motion used to move the payload plate
- (e) correcting errors or drift in the payload plate by comparison of the location of the payload plate with the position of level provided by the level sensor.
- (d) maintaining the payload plate level or at a pre-determined position in relation to level.

15 Claim 17. The stabilized buoy platform of Claim 1 wherein the means for movement of the frame sections in relation to each other is accomplished by any singular type or plurality of types of actuators including but not limited to linear actuators, motors and gears, magnets or hydraulics.

Claim 18. The method of claim 16 wherein stabilizing a singular or plurality of payload platforms
20 about a central point,

- a. the pitch axis is supported such that it can rotate or swivel 360 degrees and
- b. the roll axis is supported such that it can rotate or swivel 360 degrees orthogonal to the pitch axis, and
- c. the azimuth axis is supported such that it can rotate or swivel 360 degrees orthogonal
25 to the roll axis.

Claim 19. The stabilized platform of Claim 1 wherein the stabilized platform can be separated from the buoy platform, disassembled or folded to become a portable stabilization platform, which can rest on, or be attached to any moving object where stabilization is required.

5 Claim 20. The stabilized buoy platform of Claim 1 wherein motor brakes are attached to the moving shafts to prevent unwanted shaft motion should the power be shut off or fail.